

Dev-Documentation: Unspeech Visualization

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Purpose

The following documentation should give insight into the structure as well as the purpose behind functions of the unspeech visualization.

Project structure

The unspeech visualization is a frontend web application that brings the unspeech (<http://unspeech.net/preview>) embeddings to the web. The documentation for the core unspeech application can be found at the aforementioned link. The application is strictly split into a frontend, containing all the interaction and visualization logic and a backend that serves the data via API Requests.

Frontend functions per file

In the following chapter the technical information about the frontend will be explained in detail.

index.html

The index.html is annotated with comments that should explain the set up. The called functions can be found in the documentation further on

js/scatterme.js

`createWorker()`

function, no params

Initializes the webworker that holds the t-sne algorithm

`init()`

function, no params

Called on site load to initiate the required settings.

`draw(num:int)`

function, param: Number of data points to be drawn

Draw function that is called to fill the canvas with data points

`_draw(samples:Object)`

function, param: Object returned by the unspeech API

Function inside draw, that contains all the logic to manipulate the canvas, including initial draw, mouseover tooltips as well as sidebar tooltips

`drawUpdate(embedding:Array)`

function, param: Array containing embedding data

Periodically called by webworker to update the canvas while the tsne calculation is running.

`redraw(retData:Array)`

function, param: embedding data array

Called when a new dataset is selected to redraw the canvas

`sliceSamples(sampledata:Array)`

function, param: embedding data array

Called when data amount is reduced in settings menu.

`loadData(availableRepo:String)`

function, param: embedding data directory path.

Called from data-service when a new dataSet is selected to fetch the containing embedding data.

js/service/data-service.js

`listRepos()`

function, no params

GET request that returns the available unspeech feat files

`getVectors(featFile:string)`

function, param: path to feat file

POST request that returns a feat file